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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,567	04/02/2002	Shigeru Kamegaya	040356-0439	4492
22428	7590	02/03/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/089,567

Applicant(s)

KAMEGAYA ET AL.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 16 and 20 is/are rejected.
- 7) ☒ Claim(s) 8, 11-15 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/2/02.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 11 is objected to because of the following informalities: in line 1, "claims 7" should be "claim 7." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 9, 10, 16, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-063104. The reference is directed to a fuel cell system comprising a reformer (36) and a gas supply device (26) provided upstream of the reformer (see abstract; Fig. 1). The gas supply device generates a high temperature gas for supplying to the reformer upon startup of the fuel cell (see abstract). Regarding claims 2 and 9, the device comprises a first fuel supply mechanism (48) for supplying fuel, which is subsequently burned in a combustion chamber (46). A second fuel supply mechanism (42) downstream of the first supplies further fuel (see par. [0021] of the machine translation). Regarding claims 3 and 9, a first air supply mechanism (60b) is located downstream of the first fuel supply mechanism (see pars. [0035], [0023]). Regarding claim 4, the temperature of the combustion gas can be adjusted by adjusting the amounts of fuel and air

supplied (see par. [0035]). Regarding claim 6, a vaporizer (24) vaporizes fuel to be supplied to the gas supplying device (see par. [0019]). Regarding claim 5 and the second clause of claim 6, these are process limitations that are not considered to distinguished the claimed apparatus over the reference (see MPEP §2114). Regarding claim 7, air is supplied downstream of the second fuel supply (42) mechanism at 60b. Regarding claim 9, the air is mixed with combusted gas at a mixing part (66). Regarding claim 10, the second fuel supply mechanism is supplied on the side face of the mixing part (see Fig. 1). Regarding claim 16, a CO removal device (28) is positioned downstream of the reformer. Regarding claim 20, a combustor (24) is positioned downstream of the fuel cell anode and cathode exhaust.

Thus, the instant claims are anticipated.

#### *Allowable Subject Matter*

4. Claims 8, 11-15 and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

Claim 8 recites, among other features, that the second fuel supply mechanism injects fuel opposite the flow of high temperature gas. JP '104, the closest prior art, discloses supplying the fuel in a perpendicular manner but does not fairly suggest supplying the fuel in an "opposite" manner.

Claim 11 recites, among other features, that the second fuel supply mechanism is disposed on an end face of the mixing part. JP '104 also does not teach or fairly suggest this feature.

Claim 12 recites a vaporizing plate upstream of the second fuel supply mechanism. JP '104 also does not teach or fairly suggest this feature.

Claim 17 recites the presence of a bypass line which directly supplies high temperature gas to the CO removal device. JP '104 does not teach or fairly suggest such a bypass line.

### *Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
February 1, 2005